

I-4 HOUSE LOT DEVELOPMENT**PURPOSE AND APPLICATION**

Land grading a house lot development and house construction is a major source of sedimentation and must be carefully planned and carried out. The use of phasing, natural buffers, mulching, and temporary and permanent seeding should be the primary methods of addressing erosion control for land grading projects. Fall and winter erosion control measures must be upgraded and refined to protect the site from spring runoff and snowmelt.

Plan the project to fit the site.

Evaluate the site's strengths and weaknesses. Tailor the site layout and utilities to the topography and follow these general guidelines:

- Restrict construction activities to the least critical areas.
- Reduce impervious areas and thereby preserve existing native vegetation.
- Diffuse stormwater into buffers rather than concentrate it into channels.
- Align roadways following natural contours rather than up and down steep slopes.
- Cluster buildings to minimize the amount of earth movement needed.
- Divert clean water away from the immediate construction area to reduce the threat of erosion.

Minimize the area of bare soil exposed at one time.

- Sequence the construction of a project. Don't open up the whole site at one time. Build in phases.
- Preserve natural vegetation by flagging it and protecting it in the field.
- Create buffer strips of undisturbed vegetation between construction areas and environmentally vulnerable areas such as watercourses, ponds and wetlands.
- Lay down temporary mulching on any bare soil until final grade is reached.
- Immediately re-seed areas ready for revegetation.
- If construction extends into the fall and winter months, upgrade all erosion control measures to protect the site from spring runoff.

SPECIFICATIONS**Grading Plan Design Specifications**

The plan shall include phasing of the following practices:

- Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. Where the slope is to be mowed, the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mowing steep slopes. Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.
- Surface water shall be diverted from the face of all cut and/or fill slopes by the use of diversions, ditches and swales or conveyed downslope by the use of a designed structure, except where:
 1. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.
 2. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.
 3. Vegetation, gravel, riprap or other stabilization method must protect the face of the slope.
- On slopes with shallow sloughing, the soil should be removed to the depth of the slough or one and one half foot, whichever is greater, and filled with 6 inches of bank run gravel covered with one foot of field stone with an average size of at least 3 inches. Properly sized geotextile may be substituted for the gravel if desired. This stone should extend down the slope to a source of drainage, either a berm or a subsurface tile system.

- Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence or other related damages.
- Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.
- All disturbed areas shall be stabilized structurally or with vegetation in compliance with the appropriate BMPs.

Construction Specifications

- All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan until they are adequately stabilized.
- Any sign of rill or gully erosion shall be immediately investigated and repaired as needed.
- All graded areas shall be permanently stabilized immediately following finished grading.

Timing and Phasing

Grading shall be planned so as to minimize the length of time between initial soil exposure and final grading.







